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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,500	08/31/2001	David W. Hartwell	15311-2312	2641
24267	7590	01/05/2005	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			TORRES, JUAN A	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,500

Applicant(s)

HARTWELL, DAVID W.

Examiner

Juan A. Torres

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

In page 3 line 11 the recitation "number. . With" is suggested to be changed to "number. With".

Appropriate correction is required.

Claim Objections

Claim 2 is objected to because of the following informalities:

In line 1 of claim 2 the recitation "The error detection system as defined in claim 1 further comprising and second" is unclear, it is suggested to be changed to "The error detection system as defined in claim 1 further comprising a second"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakajima (US 6114917).

As per claim 1 Nakajima (US 6114917) discloses a error detection system for a clock signal comprising: a first counter that receives and counts the clock signal (figure 1 block 1, column 4 lines 51-52), a phase-locked loop circuit that receives the clock signal and outputs a second clock signal (figure 1 blocks 4 and 5, column 4 lines 62-65), a second counter that receives and counts the second clock signal (figure 1 block 6, column 4 lines 52-54), and a comparator that receives and compares the outputs of the first and the second counters (figure 1 block 2, column 4 lines 54-59), and an error output from the comparator that is true when the counts of the first and the second counters are unequal (figure 1 block 3, column 4 lines 59-61).

As per claim 2 Nakajima (US 6114917) discloses an output from the comparator that indicates which counter contains a higher count (figure 1 block 2, column 4 lines 54-59).

As per claim 3 Nakajima (US 6114917) discloses means for resetting the counters synchronized to the successful capture of the clock signal by the PLL (figure 1 reset signal of blocks 1,2,6 and 7, column 4 lines 45-50).

As per claim 5 Nakajima (US 6114917) discloses a method for detecting clock signal errors comprising the steps of: a first counting of the first clock signals (figure 1 block 1, column 4 lines 51-52), providing a second clock signal with a frequency that is locked to the average frequency of the first clock signal (figure 1 blocks 4 and 5, column 4 lines 62-65), a second counting of the second clock signals (figure 1 block 6, column 4 lines 52-54), detecting a difference between the first and the second countings (figure 1

block 2, column 4 lines 54-59), and signaling an error (figure 1 block 3, column 4 lines 59-61).

As per claim 6 Nakajima (US 6114917) discloses signalling which counting is higher (figure 1 block 2, column 4 lines 54-59).

As per claim 7 Nakajima (US 6114917) discloses the step of synchronizing the two countings (figure 1 reset signal of blocks 1,2,6 and 7, column 4 lines 45-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima (US 6114917) as applied to claims 1 and 5 above, and further in view of Shibata (US 5822317).

As per claim 4 Nakajima (US 6114917) discloses claim 1. Nakajima (US 6114917) doesn't disclose a sender that sends data and the clock signal, the clock signal defined as a forwarding source synchronous clock signal, and a receiver latch that accepts and latches the data therein with the forwarding clock. It is very well known and Shibata (US 5822317) discloses that the use of PLL is with a sender that sends data and the clock signal, the clock signal defined as a forwarding source synchronous clock signal and, a receiver latch that accepts and latches the data with the forwarding clock (column 1 lines 30-36). Nakajima (US 6114917) and Shibata (US 5822317)

teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the Phase lock detecting circuit disclosed by Nakajima (US 6114917) with the sender and receiver system disclosed by Shibata (US 5822317). The suggestion/motivation for doing so would have been to synchronize the sender and receiver clocks (Shibata (US 5822317) column 1 lines 30-36).

As per claim 8 Nakajima (US 6114917) discloses claim 5. Nakajima (US 6114917) doesn't disclose sending data and clock signal, wherein the clock signal is a forwarding source synchronous clock signal, receiving the data, and latching the data with the forwarding clock signal. . It is very well known and Shibata (US 5822317) discloses that the use of PLL is with a sender that sends data and the clock signal, the clock signal defined as a forwarding source synchronous clock signal and, a receiver latch that accepts and latches the data with the forwarding clock (column 1 lines 30-36). Nakajima (US 6114917) and Shibata (US 5822317) teachings are analogous art because they are from the same field of endeavor. At the time of the invention it would have been obvious to a person of ordinary skill in the art to integrate the Phase lock detecting circuit disclosed by Nakajima (US 6114917) in the sender and receiver system disclosed by Shibata (US 5822317). The suggestion/motivation for doing so would have been to synchronize the sender and receiver clocks (Shibata (US 5822317) column 1 lines 30-36).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chung (US 4929918) discloses a method and means for setting at the system level the free-running frequency of a voltage controlled oscillator (VCO) in a phase-locked loop (PLL) without requiring laser trimming or the like and thereafter dynamically adjusting said frequency if and when the correction range capability of the PLL is exceeded. Taniguchi (JP 10-322200) discloses a phase-locked loop circuit which outputs the output signal changed into a different frequency from an input-reference signal, and relates to the phase lock detector which detects the lock of the phase simulation between an input-reference signal and an output signal

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


MOHAMMED GHAYOUR
SUPERVISORY PATENT EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAT 12-13-2004